

App. No. 10/758517  
Office Action Dated June 30, 2005

**Amendments to the Claims:**

This listing of claims will replace all prior versions and listing of claims in the application.

Claim 23 is amended.

No new matter has been added.

**Listing of Claims:**

1-22. (Canceled)

23. (Currently Amended) A method of manufacturing a power module, comprising the steps of:

mounting electronic components including at least a heat generating component on one main surface of a wiring substrate and at least one non-heat generating component on a surface opposite the one main surface, with at least one non-heat generating component being in a position other than a position immediately opposite to the position of the heat generating component;

forming a curable composition layer containing (A) a thermosetting resin, (B) a thermoplastic resin, (C) a latent curing agent, and (D) an inorganic filler between a heat sink and the wiring substrate on a side of the heat generating component and pressing at least one of the heat sink and the wiring substrate against the other so that a thermally conductive and electrically insulating member is bonded in such a manner as to be deformed complementarily to unevenness in shape and height of the heat generating component; and subsequently

forming the thermally conductive and electrically insulating member by allowing the curable composition layer to be cured by heating.

24. (Original) The method of manufacturing a power module according to claim 23,

App. No. 10/758517  
Office Action Dated June 30, 2005

wherein with respect to a total amount of 100 parts by mass of a combination of (A) the thermosetting resin of not less than 50 parts and not more than 95 parts and (C) the latent curing agent of not less than 5 parts and not more than 50 parts, (B) the thermoplastic resin is contained in an amount of not less than 10 parts and not more than 100 parts; and

with respect to a total amount of not less than 5 parts by mass and not more than 30 parts by mass of a combination of (A) the thermosetting resin, (B) the thermoplastic resin, and (C) the latent curing agent, (D) the inorganic filler is contained in an amount of not less than 70 parts and not more than 95 parts.

25. (Original) The method of manufacturing a power module according to claim 23, wherein the thermosetting resin is in a liquid state at room temperature, and the thermoplastic resin is in a powdery state when the thermosetting resin is in an uncured state.

26. (Original) The method of manufacturing a power module according to claim 25, wherein the thermosetting resin that is in the liquid state at room temperature is a liquid epoxy resin.

27. (Original) The method of manufacturing a power module according to claim 23, wherein the curable composition containing (A) the thermosetting resin, (B) the thermoplastic resin, (C) the latent curing agent, and (D) the inorganic filler has a property that the viscosity increases steeply in two stages represented by: a first viscosity increasing curve with respect to temperatures equal to or higher than 70°C and lower than 130°C; and a second viscosity increasing curve with respect to temperatures equal to or higher than 130°C.

28. (Original) The method of manufacturing a power module according to claim 27, wherein the first viscosity increasing curve represents a viscosity increase resulting from the thermoplastic resin powder being swelled by absorbing the liquid component by heating.

29. (Original) The method of manufacturing a power module according to claim 23, wherein the curable composition layer is solidified at a temperature equal to or higher than 70°C

App. No. 10/758517

Office Action Dated June 30, 2005

and lower than 130°C and cured at a temperature equal to or higher than 130°C and equal to or lower than 260°C.

30. (Original) The method of manufacturing a power module according to claim 23, wherein the step of mounting the heat generating component on the wiring substrate is a step in which, after a semiconductor chip is mounted facedown, an encapsulating resin is injected between a wiring pattern on the wiring substrate and the semiconductor chip and cured.

31. (Original) The method of manufacturing a power module according to claim 23, wherein the curable composition is at least one selected from a paste-like material and a sheet-like material.

32. (Original) The method of manufacturing a power module according to claim 23, wherein bonding of the heat sink and the wiring substrate is performed under a pressure of not less than 0.1 Mpa and not more than 200 Mpa.

33. (Original) The method of manufacturing a power module according to claim 23, wherein the curable composition layer is cured by heating under a pressure of not less than 0.1 Mpa and not more than 200 Mpa.

34. (Original) The method of manufacturing a power module according to claim 23, wherein after bonding of the heat sink and the wiring substrate, a formed body is subjected to an atmosphere of a reduced pressure.

35-37 (Canceled)